

### **ABSTRACT**

The invention relates to an apparatus used in a method for determining the limpness of sheet material, in particular of bank notes, wherein the sheet material is irradiated with sound waves, sound waves emanating from the sheet material are captured and the limpness of the sheet material is determined therefrom. An especially simple and reliable determination of limpness even independent of the degree of soiling of the sheet material can be achieved by measuring both the transmitted and the reflected sound waves and to form a mathematical ratio of the reflected and transmitted sound-waves, in order to determine the limpness.

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